ProCurve Networking
HP Innovation

NEW ProCurve Switch 4200vl Series

The ProCurve Switch 4200vl series consists of modular chassis that provide a flexible, cost-effective LAN solution as an alternative to stackables. These switches offer a proven chassis form factor with high quality and reliability in 10/100 and 10/100/1000 scalable solutions that integrate easily into any network.

NEW ProCurve Switch 4202vl-48G (J8771A)

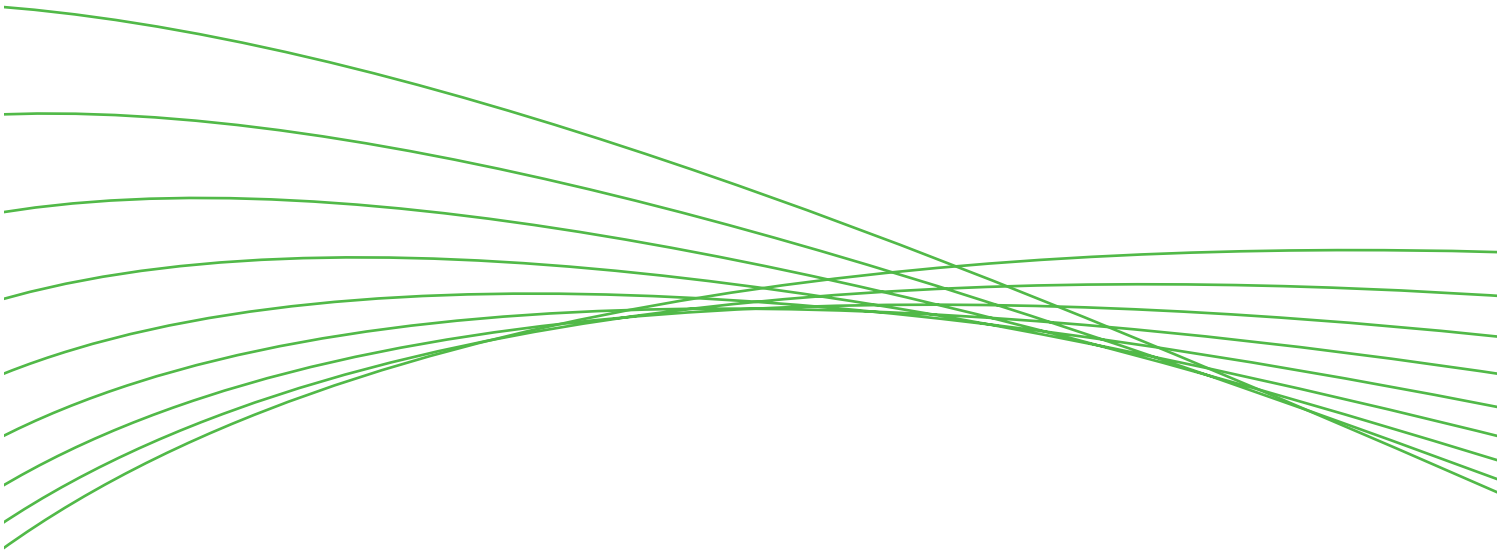
NEW ProCurve Switch 4202vl-72 (J8772A)

NEW ProCurve Switch 4204vl (J8770A)

NEW ProCurve Switch 4208vl (J8773A)

NEW ProCurve Switch 4208vl-64G (J8774A)

NEW ProCurve Switch 4208vl-96 (J8775A)



hp invent

Features and benefits

Performance

- **Non-blocking architecture**: up to 76.8 Gbps non-blocking crossbar switching fabric provides wire-speed intra- and inter-module switching with up to 48 million pps throughput, built on ProCurve custom-designed ASIC technology

Resiliency and high availability

- **802.3ad Link Aggregation Control Protocol (LACP) and ProCurve trunking**: support up to 36 trunks, each with up to 8 links (ports) per trunk; trunking across modules is supported
- **Spanning Tree Protocol (IEEE 802.1D)**: provides redundant links while preventing network loops
- **802.1w Rapid Convergence Spanning Tree Protocol**: increases network uptime through faster recovery from failed links
- **802.1s Multiple Spanning Tree**: provides high link availability in multiple VLAN environments by allowing multiple spanning trees
- **Hot-swappable modules**: permit modules and mini-GBICs to be added or swapped without interrupting the network
- **Optional redundant power supply**: provides uninterrupted power that allows hot-swapping of one of the two supplies when installed

Layer 3 routing

- **Basic IP routing**: enables automatic routing to the connected VLANs and up to 16 static routes—including one default route—in IP networks

Layer 2 switching

- **VLAN support and tagging**: support complete 802.1Q (4,096 VLAN IDs) and 256 VLANs simultaneously
- **Group VLAN Registration Protocol (GVRP)**: allows automatic learning and dynamic assignment of VLANs

Security

- **Port security**: prevents unauthorized access using MAC address lockdown
- **MAC address lockout**: prevents configured particular MAC addresses from connecting to the network
- **Multiple user authentication methods**:
  - **IEEE 802.1X**: industry-standard way of user authentication using an 802.1X supplicant on the client in conjunction with a RADIUS server
  - **Web-based authentication**: similar to 802.1X, provides a browser-based environment to authenticate clients that do not support the 802.1X supplicant
  - **MAC-based authentication**: client is authenticated with the RADIUS server based on the MAC address of the client; useful for clients that have minimal or no user interface
- **Secure FTP**: allows secure file transfer to/from the switch (protects against unwanted file downloads or unauthorized copying of switch configuration file)
- **TACACS+**: eases switch management security administration by using a password authentication server
- **Source-port filtering**: allows only specified ports to communicate with each other

Features and benefits (continued)

- **Secure Shell (SSHv2)**: encrypts all transmitted data for secure command-line interface (CLI) remote access over IP networks
- **Secure Sockets Layer (SSL)**: encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- **Switch management logon security**: can require either RADIUS or TACACS+ authentication for secure switch CLI logon
- **Custom banner**: displays security policy when users log in to the switch

Quality of service (QoS)

- **Traffic prioritization (802.1p)**: allows real-time traffic classification into 8 priority levels mapped to 3 queues
- **Class of Service (CoS)**: sets 802.1p priority tag based on IP address, IP Type of Service (ToS), L3 protocol, TCP/UDP port number, source port, and DiffServ
- **Layer 4 prioritization**: enables prioritization based on TCP/UDP ports

Manageability

- **sFlow (RFC 3176)**: provides wire-speed traffic accounting and monitoring
- **RMON and XRMON**: provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- **Friendly port names**: allow assignment of descriptive names to ports
- **ProCurve/IEEE Auto-MDIX**: automatically adjusts for straight-through or crossover cables on all 10/100/1000 ports
- **Dual flash images**: provide independent primary and secondary OS files for backup while upgrading

Convergence

- **IP multicast (data-driven IGMPv3)**: automatically prevents flooding of IP multicast traffic
- **LLDP-MED (Media Endpoint Discovery)**: a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones
- **iSCSI support**: enables the deployment of Ethernet storage area network solutions using the iSCSI standard
- **Software updates**: free downloads from the Web
- **Stacking capability**: single IP address management for a virtual stack of up to 16 switches, including the ProCurve 2500 series, 2600 series, 2800 series, 3400cl series, 6108, 6400cl series, and 4100gl series
- **Find-Fix-and-Inform**: finds and fixes common network problems automatically, then informs administrator
- **Troubleshooting**: ingress/egress port monitoring enables network problem-solving
- **Multiple configuration files**: allow a config file to be stored to flash image

Industry-leading warranty

- **Lifetime warranty**: for as long as you own the product, with next-business-day advance replacement (available in most countries)

Services

Check **www.hp.com/go/procurveservices** for part numbers and service-level descriptions. For details about services and response times in your area, please contact your local HP sales office.

ProCurve Switch 4200vl Series

Specifications

	ProCurve Switch 4202vl-48G (J8771A)	ProCurve Switch 4202vl-72 (J8772A)	ProCurve Switch 4204vl (J8770A)
What's included	3 ProCurve Switch vl 16-Port Gig-T Module (J8764A) 1 ProCurve Switch gl/xl/vl Redundant Power Supply (J4839A)	3 ProCurve Switch vl 24-Port 10/100-TX Module (J8765A) 1 ProCurve Switch gl/xl/vl Redundant Power Supply (J4839A)	1 ProCurve Switch gl/xl/vl Redundant Power Supply (J4839A)
Ports	2 open module slots 48 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab 1000Base-T) 1 RS-232C DB-9 console port	2 open module slots 72 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX) 1 RS-232C DB-9 console port	4 open module slots 1 RS-232C DB-9 console port
Maximum ports	Supports a maximum of 48 10/100 ports, 80 10/100/1000 ports, or 8 mini-GBICs	Supports a maximum of 120 10/100 ports, 32 Gigabit ports, or 8 mini-GBICs	Supports a maximum of 96 10/100 ports, 64 10/100/1000 ports, or 16 mini-GBICs
Power supplies	Includes 1 x J4839A 1 open power-supply slot	Includes 1 x J4839A 1 open power-supply slot	Includes 1 x J4839A 1 open power-supply slot
Physical characteristics			
Dimensions (D x W x H)	15.3 x 17.4 x 5.25 in. (38.86 x 44.2 x 13.34 cm) (3U height)	15.3 x 17.4 x 5.25 in. (38.86 x 44.2 x 13.34 cm) (3U height)	15.3 x 17.4 x 5.25 in. (38.86 x 44.2 x 13.34 cm) (3U height)
Weight (fully loaded)	23.81 lb. (10.8 kg)	23.81 lb. (10.8 kg)	23.81 lb. (10.8 kg)
Memory and processor			
Fabric module	MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM	MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM	MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM
Packet buffer size	36 MB	36 MB	36 MB
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only		
Performance			
Latency	<6 µs (FIFO)	<6 µs (FIFO)	<6 µs (FIFO)
Throughput	Up to 24 million pps	Up to 24 million pps	Up to 24 million pps
Switch fabric speed	38 Gbps	38 Gbps	38 Gbps
Environment			
Operating temperature	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)
Operating relative humidity	15% to 95% @ 104°F (40°C), non-condensing	15% to 95% @ 104°F (40°C), non-condensing	15% to 95% @ 104°F (40°C), non-condensing
Non-operating/Storage temperature	–40°F to 158°F (–40°C to 70°C)	–40°F to 158°F (–40°C to 70°C)	–40°F to 158°F (–40°C to 70°C)
Non-operating/Storage relative humidity	15% to 95%, non-condensing	15% to 95%, non-condensing	15% to 95%, non-condensing
Altitude	Up to 15,000 ft. (4.6 km)	N/A	Up to 15,000 ft. (4.6 km)
Acoustic	DIN 45635 T.19 per ISO 7779 64.2 dB	N/A	DIN 45635 T.19 per ISO 7779 64.2 dB
Electrical characteristics			
Maximum heat dissipation	2152 BTU/hr	2152 BTU/hr	2152 BTU/hr
Voltage	100–127 VAC/200–240 VAC	100–127 VAC/200–240 VAC	100–127 VAC/200–240 VAC
Current	8.2 A/3.8 A	8.2 A/3.8 A	8.2 A/3.8 A
Power consumption	630 W	630 W	630 W
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Safety	CSA 22.2 No. 950; UL 60950; EN60950	CSA 22.2 No. 950; UL 60950; EN60950	CSA 22.2 No. 950; UL 60950; EN60950
Emissions	FCC Class A; VCCI Class A; EN55022/CISPR-22 Class A; CISPR22 Class A; EN55024; IEC/EN61000-3-2; IEC/EN61000-3-3		
Immunity			
EN	EN55024, CISPR 24	EN55024, CISPR 24	EN55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3	IEC 61000-4-3	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4	IEC 61000-4-4	IEC 61000-4-4
Surge	IEC 61000-4-5	IEC 61000-4-5	IEC 61000-4-5
Conducted	IEC 61000-4-6	IEC 61000-4-6	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8	IEC 61000-4-8	IEC 61000-4-8
Voltage dips and interruptions	IEC 61000-4-11	IEC 61000-4-11	IEC 61000-4-11
Harmonics	EN61000-3-2, IEC61000-3-2	EN61000-3-2, IEC61000-3-2	EN61000-3-2, IEC61000-3-2
Flicker	EN61000-3-3, IEC61000-3-3	EN61000-3-3, IEC61000-3-3	EN61000-3-3, IEC61000-3-3
Management	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (DB-9 serial port console); 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB		
Standards and protocols	RFC 783 TFTP; RFC 1542 BootP; RFC 768 UDP; RFC 792 ICMP; RFC 793 TCP; RFC 826 ARP; RFC 2030 SNTP; RFC 2030 Simple Network Time Protocol; IEEE 802.3x Flow Control; DHCP Relay; RFC 3046 DHCP relay Agent Information Option 82; RFC 3376 IGMPv1/v2/v3; IEEE 802.1D Spanning Tree; IEEE 802.1w Rapid Convergence Spanning Tree; IEEE 802.1s Multiple Spanning Trees; IEEE 802.3ad Link Aggregation Control Protocol; IEEE 802.1AB Link Layer Discovery Protocol; RFC 2474 DiffServ Precedence; RFC 2597 DiffServ Expedited Forwarding (EF); RFC 2598 DiffServ Assured Forwarding (AF); RFC 2138 RADIUS; SSHv2 Secure Shell; Secure Sockets Layer (SSL); IEEE 802.1X Network Login; IEEE 802.1Q VLAN tagging; IEEE 802.1Q GVRP; IEEE 802.1p Priority; SNMPv1/v2c/v3; RFC 1493 Bridge MIB; RFC 1213 MIB II; RFC 2737 Entity MIB; RFC 2665 Ethernet MIB; RFC 2668 802.3 MAU MIB; RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events); RFC 3164 Syslog; XRMON; RFC 2613 SMON; RFC 2618 RADIUS Client MIB; RFC 791 IP; RFC 1757 RMON Groups 1,2,3,9; RFC 3176 sFlow		

ProCurve Switch 4200vl Series

Specifications

	ProCurve Switch 4208vl (J8773A)	ProCurve Switch 4208vl-64G (J8774A)	ProCurve Switch 4208vl-96 (J8775A)
What's included	1 ProCurve Switch gl/xl/vl Redundant Power Supply (J4839A)	4 ProCurve Switch vl 16-Port Gig-T Module (J8764A) 1 ProCurve Switch gl/xl/vl Redundant Power Supply (J4839A)	4 ProCurve Switch vl 24-Port 10/100-TX Module (J8765A) 1 ProCurve Switch gl/xl/vl Redundant Power Supply (J4839A)
Ports	8 open module slots 1 RS-232C DB-9 console port	4 open module slots 64 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab 1000Base-T) 1 RS-232C DB-9 console port	4 open module slots 96 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX) 1 RS-232C DB-9 console port
Maximum ports	Supports a maximum of 192 10/100 ports, 128 10/100/1000 ports, or 32 mini-GBICs	Supports a maximum of 96 10/100 ports, 128 10/100/1000 ports, or 16 mini-GBICs	Supports a maximum of 192 10/100 ports, 64 10/100/1000 ports, or 16 mini-GBICs
Power supplies	Includes 1 x J4839A 1 open power-supply slot	Includes 1 x J4839A 1 open power-supply slot	Includes 1 x J4839A 1 open power-supply slot
Physical characteristics			
Dimensions (D x W x H)	15.3 x 17.4 x 8.75 in. (38.86 x 44.2 x 22.23 cm) (5U height)	15.3 x 17.4 x 8.75 in. (38.86 x 44.2 x 22.23 cm) (5U height)	15.3 x 17.4 x 8.75 in. (38.86 x 44.2 x 22.23 cm) (5U height)
Weight (fully loaded)	26.85 lb. (12.18 kg)	23.81 lb. (10.8 kg)	23.81 lb. (10.8 kg)
Memory and processor			
Fabric module	MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM	MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM	MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM
Packet buffer size	36 MB	36 MB	36 MB
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only		
Performance			
Latency	<6 µs (FIFO)	<6 µs (FIFO)	<6 µs (FIFO)
Throughput	Up to 48 million pps	Up to 24 million pps	Up to 24 million pps
Switch fabric speed	76 Gbps	38 Gbps	38 Gbps
Environment			
Operating temperature	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)
Operating relative humidity	15% to 95% @ 104°F (40°C), non-condensing	15% to 95% @ 104°F (40°C), non-condensing	15% to 95% @ 104°F (40°C), non-condensing
Non-operating/Storage temperature	–40°F to 158°F (–40°C to 70°C)	–40°F to 158°F (–40°C to 70°C)	–40°F to 158°F (–40°C to 70°C)
Non-operating/Storage relative humidity	15% to 95%, non-condensing	15% to 95%, non-condensing	15% to 95%, non-condensing
Altitude	Up to 15,000 ft. (4.6 km)	N/A	Up to 15,000 ft. (4.6 km)
Acoustic	DIN 45635 T.19 per ISO 7779 64.2 dB	N/A	DIN 45635 T.19 per ISO 7779 64.2 dB
Electrical characteristics			
Maximum heat dissipation	2152 BTU/hr	2152 BTU/hr	2152 BTU/hr
Voltage	100–127 VAC/200–240 VAC	100–127 VAC/200–240 VAC	100–127 VAC/200–240 VAC
Current	8.2 A/3.8 A	8.2 A/3.8 A	8.2 A/3.8 A
Power consumption	630 W	630 W	630 W
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Safety	CSA 22.2 No. 950; UL 60950; EN60950	CSA 22.2 No. 950; UL 60950; EN60950	CSA 22.2 No. 950; UL 60950; EN60950
Emissions	FCC Class A; VCCI Class A; EN55022/CISPR-22 Class A; CISPR22 Class A; EN55024; IEC/EN61000-3-2; IEC/EN61000-3-3		
Immunity			
EN	EN55024, CISPR 24	EN55024, CISPR 24	EN55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3	IEC 61000-4-3	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4	IEC 61000-4-4	IEC 61000-4-4
Surge	IEC 61000-4-5	IEC 61000-4-5	IEC 61000-4-5
Conducted	IEC 61000-4-6	IEC 61000-4-6	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8	IEC 61000-4-8	IEC 61000-4-8
Voltage dips and interruptions	IEC 61000-4-11	IEC 61000-4-11	IEC 61000-4-11
Harmonics	EN61000-3-2, IEC61000-3-2	EN61000-3-2, IEC61000-3-2	EN61000-3-2, IEC61000-3-2
Flicker	EN61000-3-3, IEC61000-3-3	EN61000-3-3, IEC61000-3-3	EN61000-3-3, IEC61000-3-3
Management	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (DB-9 serial port console); 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB		
Standards and protocols	RFC 783 TFTP; RFC 1542 BootP; RFC 768 UDP; RFC 792 ICMP; RFC 793 TCP; RFC 826 ARP; RFC 2030 Simple Network Time Protocol; IEEE 802.3x Flow Control; DHCP Relay; RFC 3046 DHCP relay Agent Information Option 82; RFC 3376 IGMPv1/v2/v3; IEEE 802.1D Spanning Tree; IEEE 802.1w Rapid Convergence Spanning Tree; IEEE 802.1s Multiple Spanning Trees; IEEE 802.3ad Link Aggregation Control Protocol; IEEE 802.1AB Link Layer Discovery Protocol; RFC 2474 DiffServ Precedence; RFC 2597 DiffServ Expedited Forwarding (EF); RFC 2598 DiffServ Assured Forwarding (AF); RFC 2138 RADIUS; SSHv2 Secure Shell; Secure Sockets Layer (SSL); IEEE 802.1X Network Login; IEEE 802.1Q VLAN tagging; IEEE 802.1Q GVRP; IEEE 802.1p Priority; SNMPv1/v2c/v3; RFC 1493 Bridge MIB; RFC 1213 MIB II; RFC 2737 Entity MIB; RFC 2665 Ethernet MIB; RFC 2668 802.3 MAU MIB; RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events); RFC 3164 Syslog; XRMON; RFC 2613 SMON; RFC 2618 RADIUS Client MIB; RFC 791 IP; RFC 1757 RMON Groups 1,2,3,9; RFC 3176 sFlow		

ProCurve Switch 4200vl Series Modules

ProCurve Switch vl 12-Port 100FX MTRJ Module (J8763A)

With 12 100FX fiber MTRJ ports

Ports
12 100Base-FX ports (IEEE 802.3u Type 100Base-FX)
Duplex: full
Connectors: MTRJ

Physical characteristics
Dimensions: 8.97 x 8.0 x 1.75 in. (22.78 x 20.32 x 4.45 cm)
Weight: 1.79 lb. (0.81 kg)

ProCurve Switch vl 16-Port Gig-T Module (J8764A)

With 16 RJ-45 10/100/1000T ports

Ports
16 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T; 802.3u Type 100Base-TX; 802.3ab Type 1000Base-T)
ProCurve/IEEE Auto-MDIX: yes
Duplex: half or full
Connectors: RJ-45

Physical characteristics
Dimensions (D x W x H): 8.97 x 8.0 x 1.75 in. (22.78 x 20.32 x 4.45 cm)
Weight: 1.54 lb. (0.7 kg)

Cabling
Type:
- 1000Base-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000Base-T

ProCurve Switch vl 4-port Mini-GBIC Module (J8776A)

With 4 mini-GBIC XCVR slots for the Switch 4200vl series chassis

Ports
Duplex: full
Connectors: SC

Physical characteristics
Dimensions (D x W x H): 8.97 x 8.0 x 1.75 in. (22.78 x 20.32 x 4.45 cm)
Weight: 1.43 lb. (0.65 kg)

Cabling
Either single-mode or multimode

ProCurve Switch vl 24-Port 10/100-TX Module (J8765A)

With 24 RJ-45 10/100 ports for the Switch 4200vl series chassis

Ports
24 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T; 802.3u Type 100Base-TX)
ProCurve Auto-MDIX: yes
IEEE Auto-MDI: yes
Duplex: half or full
Connectors: RJ-45

Physical characteristics
Dimensions (D x W x H): 8.97 x 8.0 x 1.75 in. (22.78 x 20.32 x 4.45 cm)
Weight: 1.43 lb. (0.65 kg)

Cabling
Type:
- 100Base-TX: Category 5 (or better), 100 Ω differential unshielded twisted pair (UTP) or shielded twisted pair (STP), complying with IEEE 802.3u 100Base-TX

Maximum distance
100 meters

Services for accessories are covered under the product in which they are installed.

ProCurve Switch 4200vl Series Modules

Additional accessories

ProCurve Switch gl/xl/vl Redundant Power Supply (J4839A)

ProCurve Gigabit 1000Base-T Mini-GBIC (J8177B)

ProCurve Gigabit-LH-LC Mini-GBIC (J4860B)

ProCurve Gigabit-LX-LC Mini-GBIC (J4859B)

ProCurve Gigabit-SX-LC Mini-GBIC (J4858B)

ProCurve Manager 2.0

ProCurve Manager Plus 2.0 100 device limited version (J8778A)

ProCurve Manager Plus 2.0 upgrade to unlimited license (J8779A)

ProCurve Manager Plus 2.0 100 device Upgrade (J8991A)

ProCurve Manager Plus 2.0 unlimited license (J9009A)

Identity Driven Manager 2.0 base product (500 user license) (J9012A)

Identity Driven Manager 2.0 base product (upgrade from 1.0) (J9013A)

Identity Driven Manager 2.0 Add 2000 users license (J9014A)

For more information

To learn more about ProCurve Networking, please visit
www.procurve.com

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